

# AVIATION

SEPTEMBER 11, 1922

Issued Weekly

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A Superior American Torpedo Plane: the Davis-Douglas

VOLUME XIII

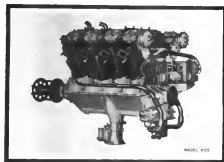
Number 11

## SPECIAL FEATURES

ARMY AND NAVY ENTRANTS IN THE DETROIT RACES  
AERO CHAMBER OF COMMERCE ELECTS OFFICERS  
THE LOGIC OF A SEPARATE AIR FORCE  
5TH DISTRICT CONVENTION, N.A.A.

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Reprinted from N. Y. American - Sunday August 27th, 1922

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Power developed sufficient to carry airplane with full flying load around the world, or one-eighth of the way to the moon—Marvelous engine gets unprecedented test and surpasses all requirements

By JOSEPH MULVANEY

America, which gave to the world the first practical airplane, has now added immeasurably to that achievement by developing the greatest airplane engine in history.

This is the story of that engine—an engine that flew around the globe without a stop, to phrase it figuratively; an engine that exceeded every record on earth for energy, efficiency and endurance; an engine which in performance surpassed every supposition of fact or fiction. This is the story of the U-873 and for the first time.

Viewed as it rested on the testing block in the plant of the Aeromarine Plane and Motor Company at Keyport, N. J., there was nothing revolutionary in the appearance of the engine, but that is one of the clearest points about that engine. It isn't a freak, constructed on wild theories for service under impossible conditions.

Rear Admiral W. A. Moffet, chief of the bureau of aeronautics, conferred with the Aeromarine officials as to the possibility of subjecting the engine to a 100-hour test. The latter, knowing the engine, proposed a 200-hour test, and it was finally decided, in order to be sure to reach what they believed would be the "breakdown stage," to set 300 hours as the ultimate limit beyond which human ingenuity could not possibly carry the endurance of such a highly-stressed mechanism.

At the successful conclusion of the test the many inspectors marveled when they stopped here, almost reluctantly, at many things. The vibration, or rather the lack of vibration, had been amazing. The angle of the cylinders accounted for that. The bearings were not burned. No, because they were over-size bearings. The oil had not clogged. No, because there was an oil separating system, operated by centrifugal force, that freed the carbon from the lubricant. Overheating? None! Valves ground? No, in. Water-jacket cracked or leaking? Absolutely tight and sound. What is wrong, then? Nothing! I

### SUPERLATIVE SURPASSED

Now this was a superlative performance, an achievement unprecedented, but the Aeromarine officials knew that engine better than many who watched every passing. Because before the Navy officials and inspectors had an eye on her they had watched U-873 run for 200 hours without a halt, and they knew what the empty machine could do.

And the commanders and inspectors who on eight-hour shifts had watched the miracle of power and endurance and efficiency did not regret the time spent in the watching. They brought back to Washington the report of the greatest motor in the world—they were the heralds of the revolution in aviation, and they were rapid messengers.

The entire Aeromarine engineering staff have been awarded with congratulations from engineering experts from all over the world on their success in enabling America to again reach the most important aeronautical development since the Wrights developed the airplane.

Write for complete illustrated story on this marvelous test; also particulars of the famous AEROMARINE Navy H-S Flying Boats.—

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**F**LYING is destined to become one of the foremost professions in the world. It is also destined to become one of the most profitable. But the rewards will go only to the men who get into aviation now—while the industry is yet young. These are the men who will get the good jobs, the important positions, the big salaries.

You can be one of these men. The first necessity is training. You must learn all about airplane structure, airplane engines, and aerodynamics. You must learn how to fly—how to be a pilot.

## WHERE TO LEARN

There is just one place where you can get the broadest knowledge of airplanes and the most thorough training in flying. That place is Dayton, Ohio—the birthplace of the airplane—the leading city in aviation progress.

In Dayton you will be taught mastery of the air on the great flying field of the Dayton Wright Company. You will learn flying under the supervision of expert and experienced teachers—men who have flown thousands upon thousands of miles and know exactly how to teach you what they have learned. You will use the very latest types of training planes. You will learn flying by the modified Gaspard System.

As a pupil of the Dayton Wright Company you will have the opportunity of visiting McCook Field—the Engineering Division of the Army Air Service. Here you may study at first hand the designing and building of many types of military aircraft.

As a pupil of the Dayton Wright Company you will learn more than flying. You will learn the principles of standard airplane design, and many other things essential to real knowledge of commercial flying.

With Dayton Wright facilities and Dayton Wright methods of training you will gain in the shortest possible time that knowledge absolutely essential to your success in this great new profession of flying. The time to learn is now—when you can still get in on the ground floor.

## WHAT TO DO FIRST

You know that flying has a limited future. You know that you can rise with the industry—if you only have the necessary knowledge. You know that the quickest place to acquire this knowledge is at the Training School for Pilots conducted by the Dayton Wright Company—a training school located in the very center of airplane knowledge and progress.

Then the first thing for you to do is to write this company for full information regarding their Training School. You can make your future what you wish by learning mastery of the air. Start now for full details. There is no charge—no obligation—no reason why you should delay a moment in seeking for complete free information on the course of instruction offered by the Training School for Pilots.

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A 180 HP Wright E-2 Motored Two-Seater Dual Training and Sport Airplane --

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**Auction at Camp Logan  
Houston, Tex., Sept. 22, 1922  
(9:30 A. M.)**

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27,717 gallons of high grade Casitor oil stored in the Gas Laboratory at Jacksonville, Fla., in 57 gal. steel drums will be sold by

### SEALED BIDS

Close Sept. 12, 12 P. M., Eastern Time

IN WASHINGTON, D. C.

An abstract of this notice will be sent to the owner of the lot and the bidder should give their name and address in writing to the person in charge of the sale at the office of the War Department, Room 1000, Building 1000, Washington, D. C.



# WAR DEPARTMENT

SEPTEMBER 11, 1922

# AVIATION

VOL. XIII NO. 11

Member of the Audit Bureau of Circulations

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## THOMAS-MORSE AIRCRAFT CORPORATION

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In addition to the personnel whose specialty will be offered for sale at the above time and place, and to the same extent, several lots of surplus J-1 gliders and biplanes have been received.

The Government reserves the right to reject any or all bids.

It will pay you to get the catalog, which will check the items in which you are interested. These will be prepared, on request, and will be sent to you. Write to the Contracting Officer, Aeronautics Division, Supply Department, Camp Service, Washington, D. C.



# Aero Chamber of Commerce Elects Officers

Inglis M. Upperra new President - Increase in Membership Reported by Board of Governors

At the annual meeting of the Board of Governors, Aeronautical Chamber of Commerce of America on Aug. 28 the following officers were elected: President, Inglis M. Upperra, Aeronautics Plans & Motor Co., Kew-Forest, N. Y.; First Vice-President, Charles L. Lawrence, Lawrence Aero-Engine Corp., New York City; Second Vice-President, C. G. Wainwright, Aircraft Manufacturing Company of America, Hamsdenport, N. Y.; Third Vice-President, Lawrence B. Sperry, Lawrence Sperry Aircraft Co., Farmingdale, L. I.; Treasurer, Charles H. Colvin, Pioneer Instrument Co., Brooklyn, N. Y.; General Manager and Assistant Treasurer, E. S. Bradley, Secretary, Luther K. Bell, Assistant Secretary, Owen A. Hissman.

Members in the Board of Governors from eleven to fifteen were made as follows: J. M. Upperra, G. M. Williams, General Manager, Dayton Wright Co., Dayton, Ohio, W. C. Young, Goodrich Tire & Rubber Co., Akron, Ohio, Charles L. Lawrence.

Steady growth by the Aeronautical Chamber of Commerce was reported, most additions to the membership including Goodrich Tire & Rubber Co., Akron, Ohio, Walworth Lubricants Co., of New York, New York, Bush Tool Co., Chicago, Ill.; Motor Metal Products Corp., Mt. Vernon, N. Y.

Following are some interesting biographical notes on the newly elected officials of the Aeronautical Chamber of Commerce:

## INGLIS MOORE UPPERRA

As president and owner of the Aeronautics Plans and Motor Corp. of Kew-Forest, N. Y., Mr. Upperra has been prominently identified with the development of aviation in the United States. His interest in flying dates from 1903, when he started to construct work with aircraft. He had three years flying experience.

Mr. Upperra was born in Evanston, Ill., on Sept. 7, 1895. His parents were Jesse Whelan Upperra and Emma Ingalls (Edwards) Upperra. He attended public schools at Kew-Forest, Brooklyn, later entering the Brooklyn Polytechnic Institute. He also studied law at Columbia University.

As owner of the Cadillac Motor Car Co. of New York, which sells Cadillac cars in New York, New Jersey and Connecticut, Mr. Upperra has been one of the leaders in the automobile business in New York since 1926.

During the World War, the Aeronautics Plans and Motor Co. manufactured airplanes and parts for the Navy. Since 1918 Mr. Upperra has continued his activities upon the promotion of mechanical aviation. The continental flying boat service which he operated on the Key West to Havana and the Detroit to Cleveland routes as well as the ground airplane service out of New York have been probably been the greatest demonstration of the safety and practicability of air transport since the war.

Mr. Upperra is in his moments of leisure aachtsman and spends much of his time cruising.

## CHARLES LAWRENCE LAWRENCE

Charles Lawrence Lawrence is one of America's pioneer aeronautical engineers, having specialized since his graduation from Yale in 1909 in airplane motor design and in aerodynamics. In 1907 he was engineer of the B.L.M. Motor Car Co. In France, during 1913-15, he built an experimental 9-cyl. 200 hp aviation engine, and developed the Biffel No. 32 wing motor.

During 1925 Mr. Lawrence was engineer of the S. P. Percor Aeroplane Co., which produced a number of Progress winged with 100-hp. Lawrence also noted engine for the military plane's testing. From 1917 to date Mr. Lawrence has been president and chief engineer of the Lawrence Aero Engine Corp. His work is the development and production

of America's only successful air-cooled radial engine has been recognized by their adoption by the U. S. Army and Navy planes.

## CHARLES C. WITMER

Charles C. Witmer is another early airplane experimenter and pilot who has been continuously engaged in aeronautical activities since 1910, during which year he won a 5th Glenn H. Curtiss Airplane Contest and San Diego, Calif. Mr. Witmer learned to fly in 1911 and during that and the following year he engaged in evaluation work in various states. He concentrated and delivered Curtiss products in Russia, Germany, France and Austria during 1913-15. In 1915 he was also employed as pilot by Harold F. McCormick, president of the International Harvester Co. Another foreign trip



Inglis M. Upperra, the new president of the Aeronautical Chamber of Commerce

in the interests of aviation took him again to Russia in 1914-15.

Mr. Witmer entered the U. S. Naval Reserve Force as a Lieutenant in March 1917. He was promoted to Lieut. Colonel in 1921. He was successively appointed superintendent, construction of aircraft, 1st Naval District, superintendent, construction of aircraft and inspectors, Akron, O.

In 1920 he was one of the organizers of the Altimeter Manufacturing Co. of America and is at present actively engaged with that company in high-pressure air development for the Army and Navy. Mr. Witmer holds Army Club of California License No. 6, and Aero Club of America License No. 22.

## LAWRENCE B. SPERRY

The name "Sperry" is associated in engineering circles throughout the world with many important inventions and technical triumphs. Lawrence B. Sperry, a pioneer in the field of aeronautical engineering, has ably maintained the Sperry prestige.

In 1906, when only 17 years old, Mr. Sperry built his own two-seater biplane which he flew the following year. In 1911 he flew the first 8-cyl. American-made plane. He was first pilot in the French Security Contest in 1914, and is the holder of the early airplane distance record with pilot and one passenger of 1.5 in 1915.

Mr. Sperry was the first man to join the Naval Flying Corps, June 5, Jan. 2, 1915, his naval service terminating when he crashed while flying an experimental naval torpedo.



Lawrence B. Sperry, third vice-president, A.C. of C.



Charles L. Lawrence, first vice-president, A.C. of C.

His professional activities began as manager, Airplane Development, Sperry Gyroscope Co., 1923-27. From 1917 to date the Lawrence Sperry Aircraft Co., Inc., of which he is the head, has been known for the development of successful types of Army and Navy planes and aircraft instruments. The company is also a leader in the field of aerial torpedo experimentation.

A recent naval and practical development in the Sperry stock holding gear applied to the Army messenger plane, which Mr. Sperry has been prominently demonstrating in flight during the past months. One of his most notable exploits was to land the Army Messenger plane, equipped with conventional wheel landing gear, on the steps of the Capitol at Washington in a demonstration of its low landing speed and ability to get in and out of tight places.

## CHARLES HERBERT COLVIN

The work of Charles Herbert Colvin in the development and construction of aircraft instruments has received due recognition by the aircraft industry as well as by the Army, Navy and Air Mail Service.

The Pioneer Instrument Co., of which Mr. Colvin is general manager and member of the firm, was organized by him early in 1919 and is now the only American firm specializing exclusively in aircraft instruments, of which some of the best known are the Pioneer air speed indicator, altimeter, compass, air direction indicator and speed and drift indicator.

Mr. Colvin graduated in 1904 from Stevens Institute of Technology with the degree of mechanical engineer, and has previous experience outside engineering work for the

Curtiss companies in 1913; the Sperry Gyroscope Co., 1914-15, and Pioneer Instrument Co., since 1915 to date. During 1916 he was engaged in flight tests of altimeters, automatic controls and aerial torpedoes.

## RANDOLPH STEWART BRADLEY

After leaving the University of Michigan, Randall Stewart Bradley was engaged for a time in civil engineering. In later years he gained a wide business experience in manufacturing and merchandising. Since Mr. Bradley's election as general manager of the Manufacturers' Aircraft Association in 1917 has thorough study and understanding of the many-sided American "aviation problem" has been recognized by his appointment by the president as the important American Airline Commission in Europe in 1929. The



Charles H. Colvin, treasurer, A.C. of C.

report of this commission on aviation conditions abroad and its recommendations for the development of civil flying in the United States have formed the ground work for practically all proposed aircraft legislation in this country.

Mr. Bradley is a member of several sub-committees of the National Advisory Committee for Aeronautics. His tenacity, ability and far-sighted personality have been successfully applied during the past few years in developing a spark of life in aviation among the aircraft manufacturers, in organizing the industry before the public and the government and in furthering the cause of civil aviation.

## Grisard Field, Cincinnati

The airport of Cincinnati, Ohio, has recently been dedicated and named "Grisard Field." This was done with the presence of Major General Patrick, Chief of Air Service, and was named after John K. Grisard, the only Air Service Officer from Cincinnati who was killed in action during the War. The dedication took place on Aug. 5 at which time twenty-eight planes, including two mail planes, came to Cincinnati from various cities.

This field will be offered to the War Department in September, and the Cincinnati Chamber of Commerce will erect hangars and other equipment supplied by the government. The total cost of purchasing the field and equipping it will amount to about \$200,000, which amount is being raised by public subscription, showing the great interest taken by the citizens of Cincinnati in this project.







## WAR DEPARTMENT

## SEPTEMBER

- Sept. 12—TRAILERS—Jefferson, Ala. Ind. Aviation. For trailing, write Motor Transport, Southern Ind. Ave. S. W. O. Wagon, O. M. Green, Jefferson, Ala. Ind.
- Sept. 12—GEORGE MAE, FIAL, Peaslee, Pa. Aviation. For trailing write CO. Franklin Ave. Ind. Peaslee, Pa.
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## SELLING PROGRAM

## OCTOBER

- Oct. 1—O. M. SUPPLIES — Camp McClellan, Ala. Aviation. For trailing write O. M. Supplies, Camp McClellan, Ala.
- Oct. 1—HARVEY — Jefferson, Ala. Ind. Aviation. For trailing write O. M. Supplies, Camp McClellan, Ala.
- Oct. 1—GEORGE MAE, FIAL, Peaslee, Pa. Aviation. For trailing write CO. Franklin Ave. Ind. Peaslee, Pa.
- Oct. 1—GEORGE MAE, FIAL, Peaslee, Pa. Aviation. For trailing write CO. Franklin Ave. Ind. Peaslee, Pa.
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Office, Director of Sales  
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# WAR DEPARTMENT







# Foreign News

**Great Britain**—In their efforts to succeed their activities with every possible safeguard, the Deane Airways Co., operating D.H.14 airplanes between London and Paris, have installed in their planes spare parts of the Chrysler Air Engine, London, an spare engine testing place. By an ingenious combination of electrical and hydraulic apparatus, the slightest defect in an engine under test can be detected and located and, in addition, the plane shows at a glance the exact power the engine is developing when running at various speeds.

The Deane Airways are so constructed that the entire nose of the airplane, in which the engine is mounted, is interchangeable with a spare nose and engine with which each engine is provided, thus enabling whenever it is necessary to change engines, the engine is run over the testing stand where, by means of specially arranged cranes, the nose, complete with engine, is swung out of the airplane and the spare nose with the overhauled engine substituted. The whole operation is completed in less than an hour, and no extra difficulty is caused with this expensive operation this time will be considerably shortened.

The 14-cylinder Armstrong-Siddley "Jaguar" radial air-cooled engine recently passed the new Air Ministry type tests, which include five consecutive runs of 30 hours each, the first half of each period being run at full throttle, and the remaining 15 hours at 75% of full power. At the end of five periods a five-minute run at full power was given. After the tests the engine was dismantled, and it appeared to be in perfect condition, no appreciable wear being noticed anywhere. The fuel and oil consumption were very low, and the engine should be very useful when the R.A.F. comes to be equipped with new flying stock. The American cylinders give very even torque and smooth running generally.—*Flight*

\* \* \*

**Argentina**—In order to develop the aviation branch of the Argentine army and to provide at the same time an improved air service from the capital to the smaller commercial centers, the director of the aeronautics service has suggested the establishment of an aerial mail system by cooperation between the ministry of war and the division general of post offices and telegraphs, the department of commerce is advised by Vice Consul Henderson, Buenos Aires.

The plan suggested with the intention of the industry of war and the postal administration, but the latter has stipulated that the administration of the service in peace times shall be under the exclusive jurisdiction of the Post Office Department, since the interests of the general public would be responsible to the public order ordinary conditions. The suggested route from Buenos Aires includes the cities of Arell, Bahia, Blanca, Patagonia, San Antonio, Santa Fe, Rosario, Cordoba, Mendoza, Rio Gallegos, and Ushuaia.

A joint committee is now preparing a detailed plan, including the schedule of deliveries, time of flight, and capacity for each trip, charges, etc.

\* \* \*

**Switzerland**—A postal air service between Geneva, Nuremberg, Berlin, Kasselburg and Moscow started on July 1. Mail for Moscow leaves Geneva twice weekly, on Wednesdays and Saturdays, by the ordinary Geneva-Nuremberg airplane. According to the schedule formulated, mail starts from Geneva at 7:00 a. m., arrives at Berlin at 2:15 p. m., is carried by the evening train to Nuremberg, from where it starts on its journey at 8:30 a. m., and arrives at Moscow at 7:15 p. m. An extraordinary rate of 2500 francs per ton is charged on letters sent by this mail. Negotiations are being carried on with a view to establishing new air services between Nuremberg with Copenhagen, Prague, Warsaw, and Moscow.

\* \* \*

**Belgium**—The Belgian budget for 1922 is said to carry an increased appropriation of 4,748,000 francs for aeronautics over the allocations for 1921, according to Consul General Morpne.

## Where to Fly

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